



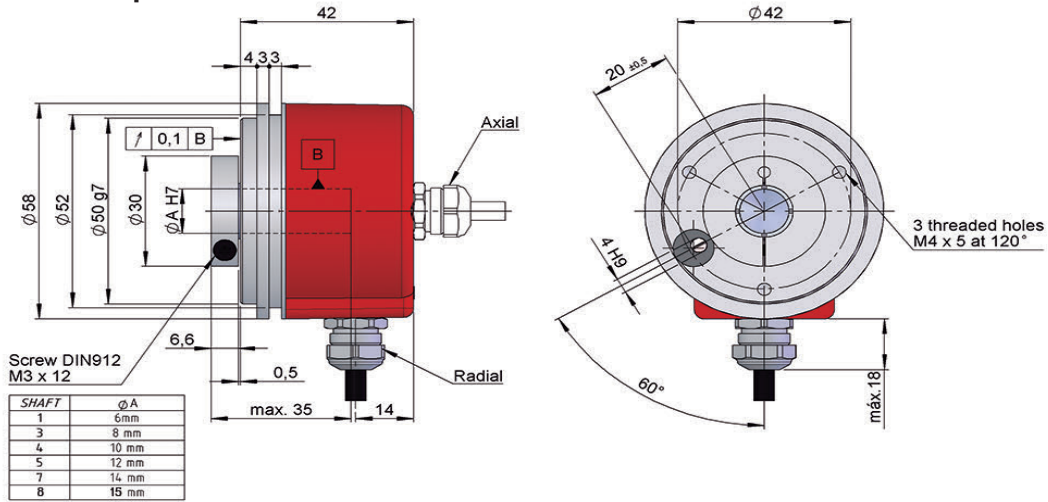
SERIE 19

HIGH RESOLUTION BLIND HOLLOW SHAFT INCREMENTAL ENCODER FOR INDUSTRIAL APPLICATIONS

- Any number of pulses available from 1 to 50.000 pulses
- Easy to install, two mechanical options, shaft fixing by setscrew or clamp
- External diameter 58 mm
- Blind hollow shaft up to 15 mm
- Protection class IP65 according to DIN EN 60529
- Anti-rotation system using elastic flange or centre pin
- Cable conection (any cable lenght available) or industrial connector
- Female connector included

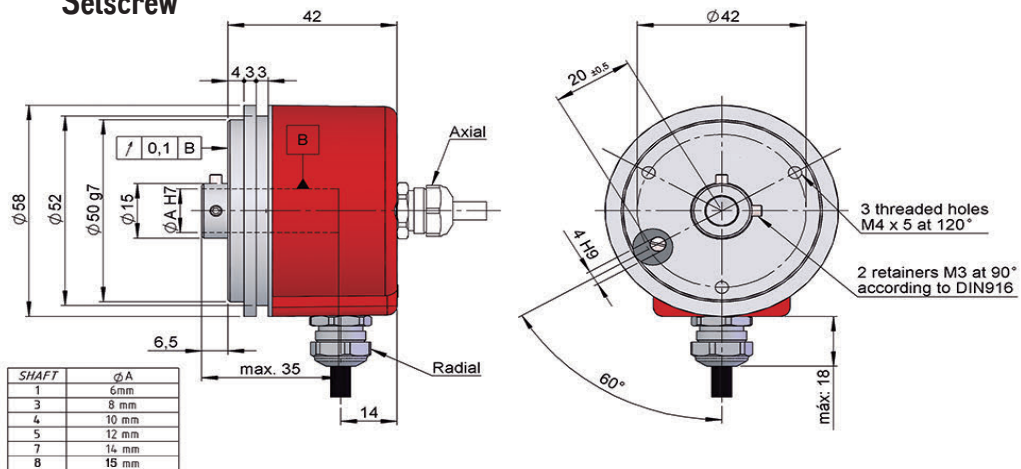
Optical Encoder	Incremental Encoder	High shaft load capacity	Vibration and shock resistant	IP 65	Temperature range -40°C	Fast delivery

Clamp



Drawing mechanical option type 1, hollow shaft type 5, connection type 3

Setscrew



Drawing mechanical option type 2, hollow shaft type 5, connection type 3



SERIE 19

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REFERENCE

Reference example: 19-15639-1024

Serie	Mechanical Option	Blind-Hollow Shaft	Output signals	Connection	Power Supply / Electronic outp.	Pulses number	Special customer
19 -	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> -	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
	1. Clamp 2. Setscrew	1. Ø6x26mm 3. Ø8x26mm 4. Ø10x26mm 5. Ø12x26mm 7. Ø14x26mm 8. Ø15x26mm	1. A 2. A+B 3. A+B+ \tilde{O} 5. A \tilde{A} +B \tilde{B} 6. A \tilde{A} +B \tilde{B} + \tilde{O} 9. A+B+0	3. Radial cable 5. Radial 90.9512 L. Radial 90.9508 (**) (**) (**)	0. 11...30V / NPN Open collector 11...30V 6. 11...30V / RS422 5V (compatible TTL) 7. 5V / RS422 5V (compatible TTL) 9. 11...30V / Line driver diferencial Push-Pull 11...30V	(*)	HT00. -40°C

(*) 10.000 to 50.000 pulses with interpolation. Available 10.000 direct optical pulses without interpolating upon request.

(**) Special customer for connection options with axial outputs, upon request.

The required anti-rotation system is not included in the reference. All systems available in the sections "MOUNTING ACCESSORIES".

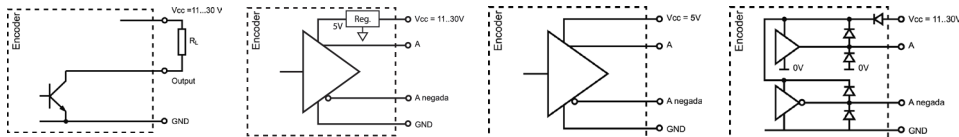
MECHANICAL SPECIFICATIONS

Materials	Cover: Aluminium Housing: Aluminium Shaft: Treated aluminium / Stainless Steel
Bearings	Ballraces
Bearings lifetime	1x10 ¹⁰ rev.
Housing fixing	Elastic flange
Shaft fixing	Clamp or Setscrew
Blind hollow shaft diameter	6, 8, 10, 12, 14 or 15 mm
Maximum number of revolutions permitted mechanically	6000 rpm
Protection against dust and splashes according to DIN EN 60529	IP65
Rotor inertia moment	30 gcm ²
Starting torque at 20°C (68°F)	Max. 2,0 Ncm
Maximum load permitted on axial shaft	40 N
Maximum load permitted on radial shaft	60 N
Permitted misalignment: Flexible clamp 90.1014 / 90.1024	±0.5 mm axial, ±0.3 mm radial
Weight aprox.	0,5 Kg
Operating temperature range	-20°C a +80°C - Standard -40°C a +80°C - Special Customer HT
Vibration	100 m/s ² (10Hz...2000Hz)
Shock	1000 m/s ² (6ms)
Maximum pulses per turn	50.000
Radial connection	Cable 2 metres or industrial connector (other cable lengths available on order) Female connector included

SERIE 19

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OUTPUT SIGNALS



OUTPUT CIRCUIT	NPN Open Collector	RS422 (TTL compatible)	RS422 (TTL compatible)	Push-Pull Differential
Reference code	0	6	7	9
Power supply	11...30 V	11...30 V	5 V ±5%	11...30 V
Output voltage	11...30 V	5 V	5 V	11...30 V
Consumption	40 mA	Typical: 80 mA Max: 160 mA	Typical: 70 mA Max: 150 mA	Typical: 45 mA Max: 150 mA
Max. load capability	40 mA	±20 mA	±20 mA	±30 mA
Length of cable allowed	50 m (a 24 V)	1200 m	1200 m	100 m
"Low" signal level	VOL < 0,4 V (a 24 V)	VOL < 0,5 V	VOL < 0,5 V	VOL < 2.5 V
"High" signal level	VOH > 22 V (a 24 V)	VOH > 2.5 V	VOH > 2.5 V	VOH > Vcc - 3 V
Frequency	100 kHz	300 kHz	300 kHz	200 kHz
Short circuit protection	Not permanent	Yes	Yes	Yes
Protection polarity inversion	Yes	Yes	No	Yes

Channel B leads (90° electric) channel A

CONNECTION



	Cable 2x2x0,14+1x0,14	(*) Cable 3x2x0,14+2x0,34	90.9508 M12 8p ccw	90.9512 M23 12p cw
GND	Yellow	Black	1	1
Vcc	White	Red	2	2
A	Brown	Yellow	3	3
B	Green	Green	4	4
A inverted		Brown	5	5
B inverted		Blue	6	6
0 (reference)	Grey	Grey	7	7
0 inverted	Grey	Orange	8	8

(*) Cable 3x2x0,14+2x0,34 only for encoders with inverted signals.

SERIE 19

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ACCESSORIES EXAMPLES

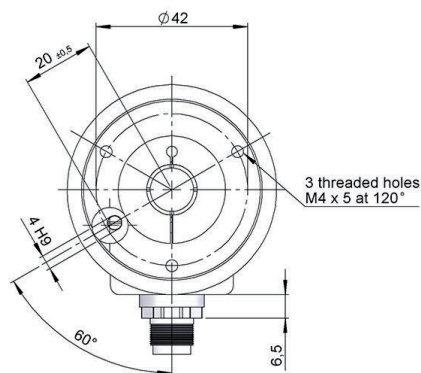
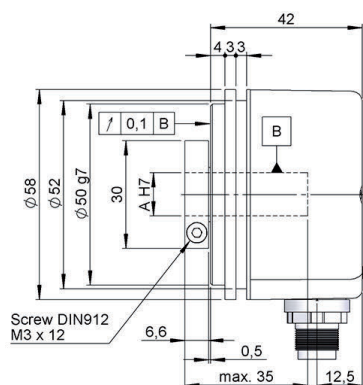


All the accessories available in the sections "ELECTRONIC MODULES AND COUNTERS" and "MOUNTING ACCESSORIES".

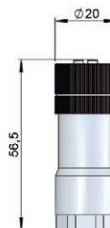
CONNECTION DIMENSIONS

Female connector included

Connection L Radial 90.9508

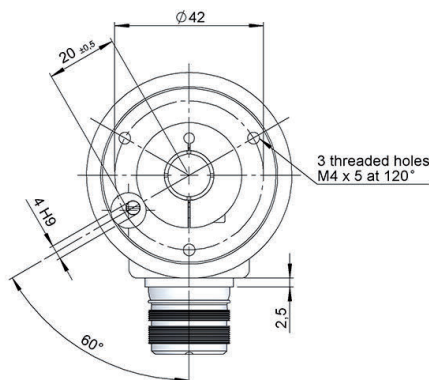
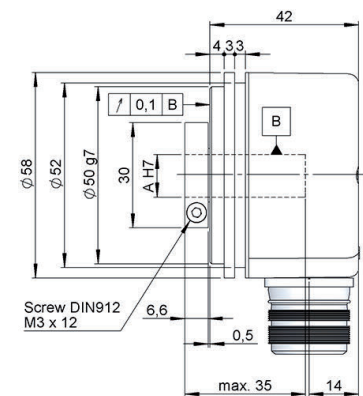


90.9508

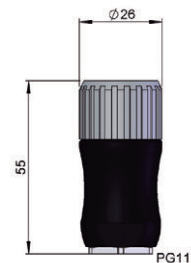


90.9508
M12 8p
male panel
counter clockwise

Connection 5 Radial 90.9512



90.9512



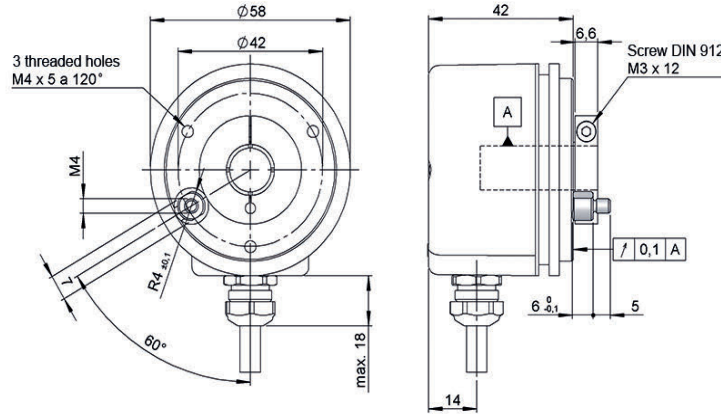
90.9512
M23 12p
male panel
clockwise

SERIE 19

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ANTI-ROTATION SYSTEMS DIMENSIONS

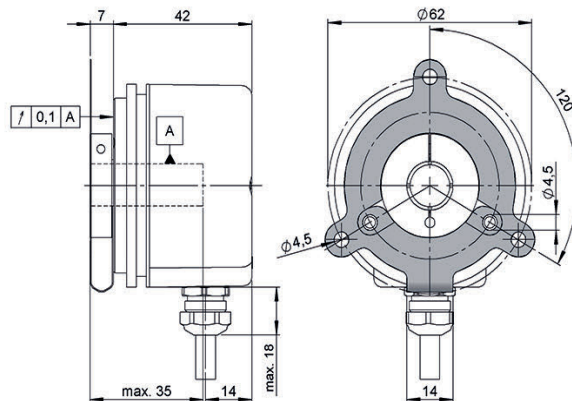
Anti-rotation Pin
90.1040



90.1040



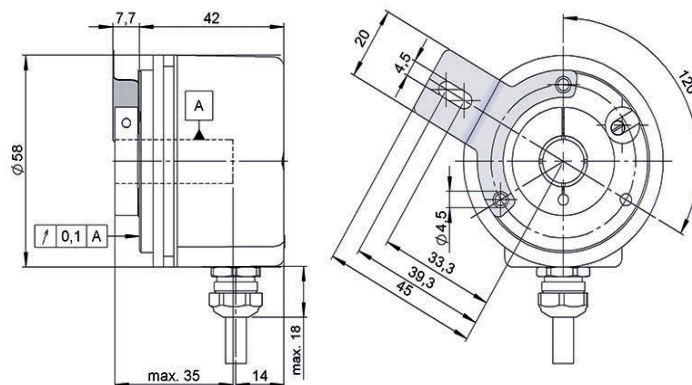
Flexible flange
90.1014



90.1014



Flexible flange
90.1018



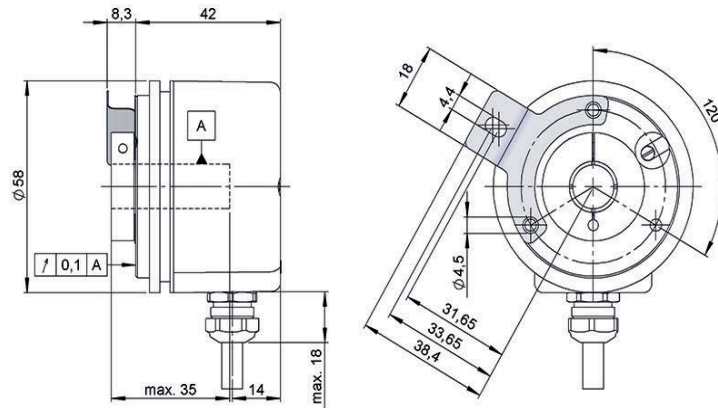
90.1018



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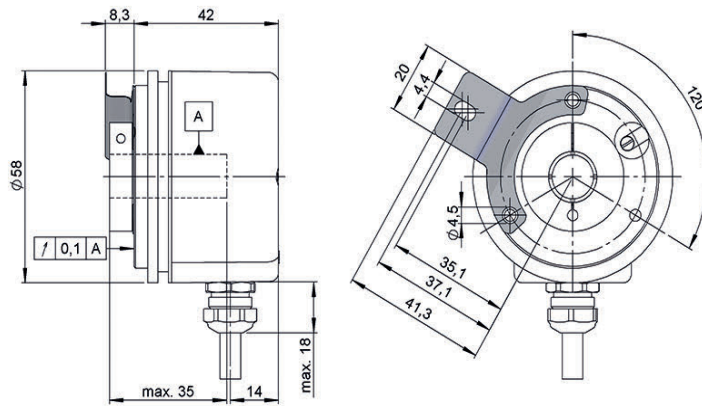
Flexible flange
90.1024



90.1024



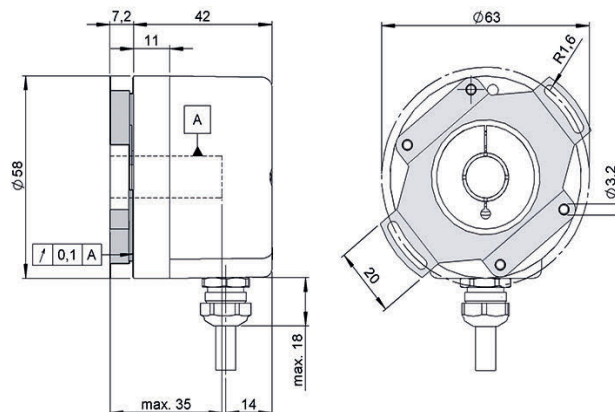
Flexible flange
90.1026



90.1026



Flexible flange
90.1027



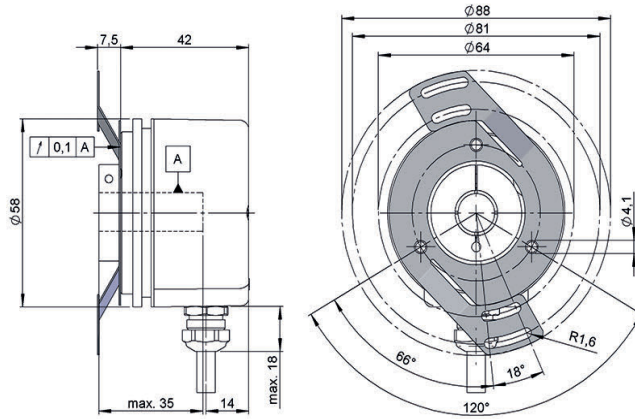
90.1027



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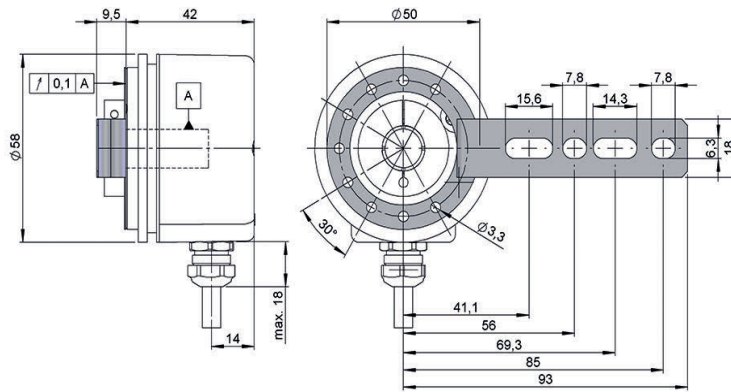
Flexible flange
90.1075



90.1075



Flexible flange
90.1095



90.1095

